



SONLIGHT

Science G

4-DAY



INSTRUCTOR'S GUIDE

Science (4-Day)

Geology, Physics, and Origins

By the Sonlight Team

*The heavens declare the glory of God; the skies
proclaim the work of his hands.”*

Psalm 19:1 (NIV)

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“Do to others what you would have them do to you”
(Matthew 7:12).

“The worker is worth his keep” (Matthew 10:10).

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Science G

Days 1–4: Date: _____ to _____

Week Overview																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	

Week 1

Date:	Day 1	Day 2	Day 3	Day 4
What's Science All About?	pp. 94-101	pp. 102-105	pp. 106-107	
Activity Sheet Questions	#1–3	#4–6	#7	
Chemically Active	See the list below for supplies you will need on Thursday [N]			pp. 3–6, Chap. 1, pp. 7–11 [N]
Supplies	We provide: GSK—soap flake . You provide: 1 small red cabbage, grater, stainless steel or enamel saucepan, water, strainer, mixing bowl, measuring cup, large clean mayonnaise jar, teaspoon, white vinegar, cream of tartar, baking soda, chlorine bleach. [N] (Note to Mom or Dad: We will only list new items needed. You will use previous items from each week repeatedly.)			
Shopping/Planning List	For next week: No items needed next week.			
Additional Subjects:				

What's Science All About?

Day 1

pp. 94–101

The little sidebar on the bottom of page 99 has some interesting wording: “What about all those substances on alien planets?” Instead of the words “alien planets,” the authors could have simply said, “other planets.” The word “alien” can mean all kinds of things, but is most commonly associated with speculation about alien life (i.e. little green men or space aliens). [pp. 98–99]

Activity Sheet Questions

Day 1

pp. 3–6, Chapter 1 pp. 7–11

Activity Sheet Questions

Activity Sheets are included after the notes and are assigned on each schedule page. Each Activity Sheet has a corresponding Answer Key page following these schedule pages.

You do not have to do every question on the Activity Sheets. Feel free to adjust and/or omit activities to meet the needs of your children. We cover the same concepts repeatedly throughout the year (and years to come!) to enable students to learn “naturally” through repetition and practice over time.

Any question marked **Challenge:** will be just that—a challenge for your children. While we believe the material covered in the challenge questions is worthwhile for your children to know, it may not be specifically explained in their reading assignment. As always, if you think any question is too difficult for your children, please feel free to skip the question.

We have provided a variety of activities to interest and challenge your children. Feel free to let your children do those activities that they enjoy and simply talk through others. We have provided space for you to fill in answers as your children respond verbally, or simply check off the items that you discuss.

Remember: This program is designed for you to use to meet your children’s needs. It is not meant to use you!

[N] Parental Notes

Suggestion: Your Activity Sheets might work more easily in a small binder for your children to keep and use as assigned. If you have more than one child using this program, extra Activity Sheets can be purchased for each child (Item #GSG41).

Chemically Active

Day
4

pp. 3–6, Chapter 1 pp. 7–11

Note to Mom or Dad: Many of the experiments this year will involve using the stove or a flame. Some may involve supplies that are poisonous, inflammable, or harmful to skin, eyes, or clothing. Some substances may produce irritating fumes and should only be used in well-ventilated areas. Have your children start the habit of washing their hands carefully after using the supplies.

An adult should always be present. Follow the experiment directions in *Chemically Active* closely, and have your children carefully read all labels to respect any warnings.

We use this book all year long to introduce you and your children to the world of chemistry.

Supplies

When supplies are listed as **“We provide:”** they are materials found in your Science G Supplies Kit (**GSK**). When supplies are listed as **“You provide:”** they are materials you can generally find around your home.

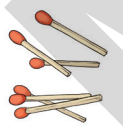
Shipping Restrictions

Due to strict import regulations, it is illegal to ship biological matter to certain countries (including New Zealand and Australia). If you requested your science supplies to be shipped to a country with such restrictions, we have removed that kit from your order and reduced your charge accordingly. ■

Science G: Week 1 Activity Sheet

What's Science All About?

- Summarize what chemists study. (p. 98) *(They study substances—what they are, what they can do, what's inside them and how they can change.)*
- What was the biggest problem with early matches? (p. 100) *(They caught fire too easily.)*
- How is Teflon® unique as a substance? (p. 101) *(It doesn't become sticky when it gets hot.)*
- The smallest particle that can have the properties of an element is called what? (p. 104) *(an atom)*
Atoms that stick together in groups of two or more are called *(molecules)*
- Oxygen gas is an element because... (pp. 104–105) *(It is a substance made from only one type of atom)*
- Do reactions always happen when you mix substances together? Explain. (p. 105) *(No, substances can also mix without reacting or bonding together, in which case they are called a mixture rather than a chemical compound.)*



Challenge! Draw an “X” in the appropriate column to classify each substance as a mixture, element, or a compound. Feel free to use the Periodic Table of Elements on pp. 124–125 if you get stuck. (pp. 106–107)

	Mixture	Compound	Element
hydrogen			X
water		X	
table salt (sodium chloride)		X	
granola	X		
nitrogen			X
hydrogen peroxide		X	

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Geology, Physics, and Origins | 4-Day | Week 1 Activity Sheet

1



What's Science All About?

1. Summarize what chemists study. (p. 98) _____

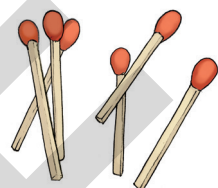
2. What was the biggest problem with early matches? (p. 100) _____

3. How is Teflon® unique as a substance? (p. 101) _____

4. The smallest particle that can have the properties of an element is called what? (p. 104) _____
 Atoms that stick together in groups of two or more are called _____.
5. Oxygen gas is an element because... (pp. 104–105) _____

6. Do reactions always happen when you mix substances together? Explain. (p. 105) _____

7. **Challenge!** Draw an "X" in the appropriate column to classify each substance as a mixture, element, or a compound.
 Feel free to use the Periodic Table of Elements on pp. 124–125 if you get stuck. (pp. 106–107)



	Mixture	Compound	Element
hydrogen			
water			
table salt (sodium chloride)			
granola			
nitrogen			
hydrogen peroxide			